

Post Design-Build Evaluation Report

Project Description: Courtland Street Accelerated Bridge Construction Project

**P.I. Number: 752015-
County: Fulton
GDOT District: District 7**

Date Conducted: December 4, 2018



1. **Project Description:** The project included the construction necessary to replace the Courtland Street Bridge between Martin Luther King Jr. Drive and Gilmer Street. The Courtland Street Bridge over MARTA, CSX, and Decatur Street was 1,077 feet long and had 28 spans with a maximum span length of 84 feet. The bridge was 60 feet out to out and 45 feet gutter to gutter. The project replaced the bridge structure entirely due to the deteriorating conditions of the bridge. The bridge dimensions and vertical profile remained the same. The span at CSX will be increased to allow for a third track.

2. **Design-Build delivery goal(s):** Expedited delivery of a bridge in a congested area over the railroad and MARTA. Accelerated Bridge Construction (ABC) including accepted Alternative Technical Concepts (ATCs) from the DB Team, allowed for the minimization of the closure duration of the bridge.

3. **Project stakeholders:**
 - GDOT – Innovative Delivery, District 7, Environmental Services, Bridge Design, State Utilities
 - C.W. Matthews Contracting Co. – Prime Contractor
 - Michael Baker International – Prime Designer/ Engineer of Record
 - City of Atlanta
 - MARTA
 - CSX Transportation
 - FHWA
 - Georgia State University
 - Georgia Building Authority

4. **Project Summary:**

	Project Milestone	Date
Pre-Let	Public Notice Advertisement (PNA)	11/18/2016
	Request for Qualifications (RFQ)	01/25/2017
	Letter of Interest (LOI)/Statement of Qualifications (SOQ)	02/24/2017
	Notice to Finalists	03/10/2017
	Request for Proposals (RFP)	03/24/2017
	Administrative Package Due	06/23/2017
	Technical Package Due	06/23/2017
	Price Proposal / Project Letting	07/21/2017
Post-Let	Project Award	08/04/2017
	NTP1 – Preliminary Design	09/07/2017
	NTP2 – Final Design Activities	09/07/2017
	Conditional NTP 3 – Construction Phase	12/21/2017
	Milestone Deadline – New Bridge Open to Traffic	10/07/2018
	Contract Completion Date	04/24/2019
	Substantial Project Completion	11/02/2018

5. Design-Build Proposers:

	Contractor	Designer	Total Bid
1	C.W. Matthews Contracting Co.	Michael Baker International	\$21,068,491.58
2	Brasfield & Gorrie	Neel-Schaffer	\$20,656,500.00
3	Superior Construction Co.	Infrastructure Consulting & Engineering	\$21,904,604.00
4	Archer Western Contractors	Heath & Lineback Engineers, Inc.	\$22,521,500.00

6. Stipend

- a. Was a stipend (stipulated fee) offered to proposing Design-Build Teams? Yes No

If yes, how much per firm: \$100,000

7. Design-Build Request for Proposals (RFP)

- a. Type of procurement: One Phase/Low Bid Two Phase/Low Bid Best Value

Note: Six Design-Build Teams submitted LOI/SOQ packages in response to the RFQ and four were notified to be finalists. On June 23, 2017 the Department received four price proposals and corresponding technical proposals.

- b. Advertisement duration: 30 days 60 days 90 days 90 days +

- c. Was a draft RFP released for this project? Yes No

If yes # of releases: N/A

Was a Q&A format provided? Yes No

- d. Were One-on-One meetings held with proposers? Yes No

- e. List GDOT offices involved in the RFP development: Design Policy & Support, Engineering Services, Environmental Services, Innovative Delivery, Utilities, Construction, Bridge, District 7, Traffic Operations

8. Design-Build RFP Package

- a. List items included in the RFP package:

Item	Yes	No	Notes
DBB Reference Drawings	X		
Approved Existing BFI	X		
Approved Concept Report	X		
Design Criteria	X		
Design Files	X		
Approved Design Variance	X		
Drainage & Erosion Plans	X		
Environmental Working Document	X		
Final Field Plan Review Documents	X		
Geometry (CAiCE & InRoads)	X		
Approved Pavement Design	X		
Right of Way Documents	X		
Railroad Coordination Information	X		
Value Engineering Study	X		
Approved Courtland Street Detour Map	X		

Design-Build Costing Plans	X		
NEPA Categorical Exclusion	X		
Air Assessment Addendum	X		
Type III Noise Screening	X		
Survey Control Package	X		
Existing SUE & SUE QLA	X		
MOU and Utility Analysis Sheets	X		MOUs included in the contract
Approved ROW Plans	X		
Cost to Cures	X		
GDOT Shelf, Supplemental, and Reference Specification/Special Provisions	X		
City of Atlanta Water & Sewer Details	X		
City of Atlanta Water Specifications & Notes	X		

- b. General observations of the RFP contents and/or procurement process:
 - o Design-Build Team noted that inclusion of the existing BFI was helpful
 - o Design Team noted that the survey control package was based on local survey datum and was not on the state plane, which increased the challenge while completing design.
 - o Design-Build Team questioned the need for the 4D model, as it did not benefit the construction techniques used. OID used this project as a test/pilot project for the use of 4D modeling, due to 1) the close proximity of the surrounding infrastructure and 2) the potential for increased public outreach on the project.
 - o Design Team noted the abutment wall as a shift of risk that may not have been appropriate. GDOT to consider being more clear on these type requirements.
- c. Were conflicts in project scope identified: Yes No
 If yes, what sections should be revised for future RFPs:

9. Environmental

- a. Type of document: NEPA: Level: PCE CE EA/FONSI EIS/ROD
 GEPA: Level: Type A Type B EER/NOD
- b. Was the environmental document approved prior to the RFP advertisement? Yes No
 If no, when was the NEPA/GEPA document approved?
- c. Was a re-evaluation performed post-let? Yes No
 If yes, describe scenario why a re-evaluation was required:
 If yes, did the Design-Build Team perform the re-evaluation? Yes No
 Did the Design-Build Team provide supporting documentation? Yes No
- d. General observations of the pre-let or post-let environmental process:
 - i. Archeological monitoring had the potential to significantly delay the project, but was not stipulated in the contract sufficiently. No significant artifacts were found during construction.

10. Environmental Permitting

- a. Type of 404 permit required: NWP IP Other None
- b. Was mitigation required as part of the permit? Yes No
 If yes, did the Design-Build Team perform mitigation and/or acquire credits? Yes No
- c. Was a Stream Buffer Variance (SBV) required? Yes No

- d. List any other permits required by the project (not counting NPDES Permit): None
- e. General observations of the environmental permitting process: None

11. NPDES Permit

- a. Did the Design-Build Team prepare the Notice of Intent (NOI)? Yes No NA
- b. Did the Design-Build Team pay the NPDES permitting fee? Yes No NA
- c. Were the ESPCP regularly redlined? Yes No NA
- d. Did any self-report actions occur? Yes No
If yes, describe the reason(s) and outcome(s):
- e. Was a consent order filed? Yes No
If yes, describe the reason(s) and outcome(s):
- i. Additional comments:

12. Right of Way (R/W)

- a. Was R/W required? Yes No
If yes, who was responsible for R/W? GDOT Locals Design-Build Tea (City of Atlanta)
If yes, was it acquired prior to award of the Design-Build contract? Yes No
If yes, did R/W acquisition activities impact the project schedule? Yes No
- b. How were R/W commitments or cost-to-cure elements handled on this project:
 - o Any commitments related to the acquisition of the R/W were included in Volume 2 of the RFP.
- c. List any special circumstances, conditions, or property owner commitments of R/W acquisition:
 - o All special circumstances, conditions, and property owner commitments were detailed in Volume 2 of the RFP.
- d. General observations of the R/W acquisition process:
 - o Focused coordination between the City of Atlanta and GSU with the assistance of GDOT – and the PMC - was needed to ensure acquisitions didn't impact the project schedule.
 - o Many of the cost-to-cure items ended up behind schedule. DB Team successfully managed these cost-to-cure items, and property owners were helpful in coordinating with the contractor, but this could have delayed the project if not managed correctly.

13. Utilities

- a. Was SUE performed pre-let and included in the RFP package? Yes No
If yes, what level? QL-D QL-C QL-B QL-A
If No, what was the mitigating activity (e.g. white lining specification, "no-conflict" letters, first submission plans):
- b. Were Design-Build Utility MOU's executed? Yes No
- c. List the utility owners, if any, which were included in the Design-Build contract: Atlanta Gas Light Company, AT&T DBA Bellsouth, CenturyLink Communications LLC, City of Atlanta – Watershed, Comcast, Crown Castle, Georgia Power Distribution, Georgia Power Network, Level 3 Communication, MCI Metro Access Transmission Services LLC, Southern Telecom Inc, Tower Cloud, Zayo Fiber
- d. Generally describe observations with respect to Design-Build utility coordination:
 - o There were a large number of utilities in the area, which required much early coordination to minimize impacts to the project schedule.

- o Contractor noted the use of SUE QL-A as being extremely helpful in finalizing their design and preparing their bid.
- o Note that CSX was also in the corridor, and DB Team was able to successfully manage their reviews.
- e. Generally describe any areas of improvement with respect to Design-Build utility coordination:
 - o Utility coordination experienced very few issues, resulting in utilities being moved on time and in a very efficient manner.
 - o Contractor excavated foundations delicately upfront where utilities were present to uncover and inspect the state of certain utilities to determine a course of action. GDOT & Utility owners both noted this as a success for the project.
 - o City of Atlanta permitted a new utility to install new facilities within the project limits during the construction period, without advance notice to contractor. Ensure permitting agency notifies contractor in the area prior to permitting utility work.
- f. What was the frequency of utility coordination meetings?
 - o Monthly during design.

14. Geotechnical

- a. Was an approved Soils Report included in the RFP package? Yes No
If no, was a Soils Report required for the project? Yes No
- b. Was an approved BFI included in the RFP package? Yes No
If no, was a BFI required for this project? Yes No
- c. Was an approved WFI included in the RFP package? Yes No
If no, was a WFI required for this project? Yes No
- d. Was an approved High Mast Foundation Investigation report included in the RFP package? Yes No
If no, was a HMFI required for this project? Yes No
- e. Were there any geotechnical issues encountered on construction? Yes No
If yes, describe issues and outcome:
 - o Existing subsurface void area was discovered under Gilmer Street

15. Design and Construction Phases

- a. Did the Design-Build Team advance portions of the project to the construction phase while other portions of the project continued to be designed and/or permits obtained? Yes No
If yes, describe: Conditional NTP 3a was issued for erosion control, MOT, and the construction of several bridge foundations. Conditional NTP 3b was issued for bridge beam fabrication. Conditional NTP 3c was issued for utility relocations. Conditional NTP 3d was issued for Area 1 substructure construction. Conditional NTP 3e was issued for limited Foundation and Substructure construction. NTP 3 for all remaining construction activities was issued on May 1, 2018.
- b. Describe the typical frequency for progress meetings? Bi-weekly.
- c. Were the Design-Build Team plans/submittals of acceptable quality? Yes No
If no, describe issue and any corrective actions taken:

- d. Were GDOT's review times adequate? Yes No
If no, describe:
General observations of review times:
- e. Was the Asphalt Index specification included in this project? Yes No
- f. Was the Fuel Index specification included in this project? Yes No
- g. Was construction the Maintenance of Traffic (MOT) acceptable? Yes No
If no, describe:
- h. Was the Schedule of Values adequate? Yes No
If no, describe:
- i. Was the pay voucher and overall payment process acceptable? Yes No
If no, describe:
- j. Was the Critical Path Method (CPM) schedule specification used on this project? Yes No
If yes, describe general experiences (pro or con) using the CPM specification:
o Contractor noted this project as specifically needing a CPM spec, and appreciated its inclusion.
If yes, any suggested improvements to the use of CPM schedule:
- k. Were there any unique issues (to Design-Build) that occurred? Yes No
If yes, describe:
o Design-Build team submitted - and GDOT accepted - bridge foundation plans initially without a completed superstructure design in order to expedite schedule.
o Design-Build Team construction approach – constructing the bridge in two phases longitudinally – was seen as a unique approach which again allowed for a reduced schedule.
o Design-Build Team approached quick review times, and collaborative reviews from GDOT Bridge Office.
o Micropiles used in the foundation allowed the substructure bridge work to begin while traffic was still using the existing bridge.
- l. Were sound barriers required on this project? Yes No
If yes, describe the material/color:
If yes, was the sound barrier material/color specified in the contract? Yes No
If yes, was the sound barrier height/location specified in the contract? Yes No
- m. Were there lane closure restrictions on this project? Yes No
If yes, were they adequate or could they have been modified for efficiency:
o Restrictions were adequate
- n. Were there ITS outage restrictions on this project? Yes No NA
If yes, were they adequate or could they have been modified for efficiency:
- o. Were there new or existing Traffic Signal modifications required? Yes No
If yes, were the traffic signal permits obtained by GDOT: Yes No
- p. Were As-built plans prepared by the Design-Build Team? Yes No Pending

16. Design-Build Innovations

- a. Were there innovative designs, solutions or materials used on this project? Yes No
If yes, describe:
o Galvanized Steel Intermediate Diaphragms where vertical clearance is less than 20'

- Integrated Concrete – Steel Edge beams
- Uplift capacity of micropiles
- Type III Cement Concrete Mix Designs
- Design Team submitted bridge & roadway plans in phases
- Communication outreach & stakeholder involvement was above minimum RFP requirements

b. Were any Value Engineering Proposals (VEP) submitted? Yes No

If yes, fill out the below information:

No.	VECP Description	Total Savings	Approved
1		\$	N/A

e. List other benefits that are not reflected in the cost savings:

17. Supplemental Agreement Summary-

SA No.	Amount	Description
1	\$6,946.33	UST Removal
2	\$12,122.99	Phase II Soil Removal/Revised Green Sheet
3	\$0	Revised EEO Federal Provisions
4	\$187,719.29	MARTA Track Time
5	\$15,015.92	Gilmer Street Void Repair

18. DBE

- a. What was the project’s DBE goal? 4%
- b. Was it or will it be met? Yes No

If yes, generally describe utilization:

- Multiple disciplines construction and design phase.

19. Summary of observations from Office of Innovative Delivery (OID), Construction, DB Team

- First GDOT Design-Build project where LowBid price was not awarded the project, due mostly to 50% technical score. 50% technical score directly contributed to the success of the project. Contractor intentionally chose to 1) prioritize the schedule by looking for ways to reduce the construction period and 2) put a premium on increased public outreach and stakeholder involvement. Unsolicited stakeholder letter of endorsement speaks highly to contractor’s dedication to this element of the project.
- Both DB Team and GDOT noted the importance of having shared vision to achieve the common goal of delivering a quality project in an expedited manner. Contract expectations/durations were clearly stipulated, but still allowed DB Teams appropriate flexibility.
- Contractor noted that level of public/ media outreach expected from contractor was unclear in contract, and full potential was not realized.
- Designer noted the extremely reduced design timeframe from September 2017 to May 2018 to complete all bridge design, and appreciated the contractor’s approach to delivery with increased DOT

collaboration. Although co-location was not used on the project, the increased DB Team & GDOT collaboration was paramount to the success of the project.

20. Recommendations

- Contractor noted that RFI & NCR process was clear in contract and DB Manual but roles/responsibilities in PMCS could be better documented, including role of EOR in the process. GDOT to review RFI & NCR processes on future DB projects.
- City of Atlanta noted the high level of success for this project, and recommended further COA bridges be delivered using a similar approach.

21. Notable achievements by early interaction of design and contractor

- Contractor noted that early interaction allowed DB Team to pursue multiple options to deliver the project – regarding different delivery timeframes. Contractor noted that Liquidated Damages need to be sufficient enough to drive GDOT's goals for the project, but not so high they hinder DB Team flexibility.

22. Post Design-Build Evaluation participants:

